

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Applicants:

Date: August 17, 2001

Beck et al.

Group Art Unit:

Serial No.: Unknown

Examiner: Unknown

Filed: Unknown

Docket No.: CH919980049US1

For: MICROELECTRONIC DEVICE FOR STORING INFORMATION AND METHOD THEREOF

Assistant Commissioner for Patents
BOX PCT
Washington, D. C. 20231

PRELIMINARY AMENDMENT

Please cancel substitute claims 1-26 and add the following new claims 27-53:

--27(new). A microelectronic device for storing digital information, the device having a switchable ohmic resistance between electrodes, which said ohmic resistance is reversibly switchable between different states in response to application of different voltage pulses to the electrodes, each different state corresponding to a different value of stored information; wherein the ohmic resistance is formed from a substance comprising components A_x, B_y, and oxygen O_z, in which:

a' said component A is a member of Alkaline metals (group IA), or Alkaline Earth metals (group IIA), or Rare Earth elements, or Scandium, or Yttrium;

said component B is a transition metal being member of one of the groups IB to VIII, or a member of one of the groups IIIA, IVA, VA; and

said substance comprising a dopant of one of or a combination of different transition metals, the total dopant amount being larger than 0% and smaller than 5%.